

CCMI-2022 Data Policy

The goal of the IGAC/SPARC Chemistry-Climate Model Initiative (CCMI) is to improve the performance of troposphere/stratosphere resolving Chemistry-Climate Models (CCMs) and their underlying GCMs (General Circulation Models) through process-oriented evaluation, made possible by the coordinated analysis of model output and fostered by open discussion between all participants.

Achieving these goals requires extensive comparisons and evaluations of a wide range of output from a large number of CCMs. For the CCMI-2022 project this archive of model output is being stored at the Centre for Environmental Data Analysis (CEDA) in the United Kingdom. Housing of the archive at CEDA provides for easy access to all interested researchers and allows for rigorous checking of the file format and metadata of submitted model data, going a significant way towards making the data open and FAIR (Findable, Accessible, Interoperable, and Reusable).

We encourage analysis of the model output by all interested researchers. To acknowledge the significant efforts by the modelling groups to produce the data, respect the research interests of the modelling groups and to encourage open discussions between researchers analyzing the model output and the modelling groups, by using the CCMI-2022 model output you agree to abide by the CCMI data access policy outlined below. This policy seeks to strike a balance between protecting and acknowledging the work of the modeling groups and encouraging legitimate use of the data sets.

Note that contact information for the Principal Investigators of participating modelling groups and the appropriate scientific reference for the model description papers for each group can be found on the CCMI website at http://blogs.reading.ac.uk/ccmi/ccmi-2022_archive/.

Data Access Policy:

1) Above all, users of the CCMI-2022 data are expected to respect the interests of the CCM Principal Investigators (PIs) and their research groups in the interpretation, presentation, and publication of the model output. The best way to achieve this is for a routine line of communication to be opened with the model PIs as collaborators to discuss model output and their research. This guideline implicitly recognizes the complexity of the models and interpretive efforts, and the possibility of ongoing scientific work by the model PIs that has yet to be published or otherwise made available to others.

2) The CCMI-2022 data policy will be in PHASE 1 for 18 months after the last model simulations are submitted to the data archive or until June 2023, whichever occurs first. Those wishing to use the output from CCMI model runs during phase 1 of the project are requested to respect the following:

- The phase 1 policy allows for the free and open use of model output but includes the obligation to offer co-authorship to model PIs on any manuscripts that are submitted for publication during this time. In return, it is expected that model PIs will constructively participate in the analysis and interpretation of the results.
- Researchers are kindly asked to provide a brief outline of any planned analysis and a list of the model fields that are central to their work to help avoid duplication and conflicts between groups. The received information will be made available through the CCMI-2022 page of the CCMI website (<http://blogs.reading.ac.uk/ccmi/ccmi-2022/>)

3) At the end of Phase 1 model data will be made publicly available for use by any researcher or other users provided these users respect the license the data was produced under. It is strongly recommended that users send evaluations, draft presentations, or papers to model PIs and the CCMI coordinators (david.plummer@ec.gc.ca and nagashima.tatsuya@nies.go.jp) two weeks before submission for notification and for the possibility to comment within this 2-week period for quality control.

4) Any publications using the CCMI-2022 data should properly reference the models that were used and include the following acknowledgement:

"We acknowledge the modeling groups for making their simulations available for this analysis, the joint WCRP SPARC/IGAC Chemistry-Climate Model Initiative (CCMI) for organizing and coordinating the model data analysis activity, and the Centre for Environmental Data Analysis (CEDA) for collecting and archiving the CCMI model output."

5) Occasionally, model output contributed to the archive has been found to contain errors of various sorts. In such cases, the erroneous output will be withdrawn or replaced. This will be noted at the CCMI web site in an errata and notes page that can be found at http://blogs.reading.ac.uk/ccmi/ccmi-2022_archive/. The errata page should be checked frequently to avoid working with erroneous output and to determine whether any of the downloaded files need to be updated or discarded. CCMI collaborators who find undetected errors in model output are asked to contact the responsible modeling group.

6) The CCMI-2022 model output is, by default, produced under the Creative Commons Attribution-ShareAlike 4.0 ([CC BY-SA 4.0](https://creativecommons.org/licenses/by-sa/4.0/)) license. Note, however, that individual modelling groups may choose to make their data available under a different license. The particular license that applies for each model will be detailed in the metadata of each netCDF file. Users of the data are expected to respect the license under which the data is made available. If exceptions to the existing license are required for certain uses, please contact the CCMI coordinators.